

## **A boundary value problem of aerohydrodynamics in designing an axisymmetric body with jet blowout**

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### **Abstract**

A numerical and analytical method for constructing a shape of the axisymmetric body streamlined with jet blowout by the specified velocity distribution along its meridian section is proposed. The foundation of the method is the iteration process based on the solutions of an inverse problem in the plane case and a primal problem for the axisymmetric body. A program realizing the iteration process is set up and examples of numerical calculations are given. © Allerton Press, Inc., 2010.

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### **Keywords**

Axisymmetric body, Ideal incompressible fluid, Inverse boundary value problem, Iteration process, Jet blowout